

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's	)	
Rules to Provide for Flexible Use of the	)	WT Docket No. 05-62
896-901 MHz and 935-940 MHz Bands	)	
Allotted to the Business and Industrial Land	)	
Transportation Pool	)	

To: The Commission

**Joint Comments of the Railway Association of Canada,  
Canadian National Railway and Canadian Pacific Railway**

The Railway Association of Canada ("RAC"), the Canadian National Railway ("CN") and Canadian Pacific Railway ("CPR"), all of which are hereafter collectively called the "Canadian Railway Interests", hereby jointly submit their Comments in response to the Commission's Notice of Proposed Rulemaking (NPRM) in the above-referenced matter.<sup>1</sup>

**I. Summary of Position**

The Canadian Railway Interests urge the FCC not to include in its proposed auction of 900 MHz channels the six frequencies that are used both in the U.S. and Canada for operational control of train movements (also know as the "Advanced Train Control System" or "ATCS" Channels). In addition, we urge

---

<sup>1</sup> FCC 05-31, released February 15, 2005.

the FCC to impose stringent interference protection safeguards on any cellular-type systems that operate on frequencies that are adjacent to those six channels in order to protect mission-critical train control communications links from interference. In support of this position, the Canadian Railway Interests state as follows:

## **II. Description of the Canadian Railway Interests**

RAC is an organization representing some 60 member freight, tourist, commuter, and intercity Canadian railways, including the two largest freight railway systems in Canada, CN and CPR. RAC holds a spectrum license issued by Industry Canada (formerly known as the Canadian Department of Communications) for six frequency pairs in the 900 MHz band that are used by railway companies in Canada (principally CN and CPR) for various types of train movement and train control operations.<sup>2</sup> This is a geographic-area “ribbon” license that follows the railway rights-of-way in Canada. As the government-approved frequency coordinating agency for all railroad land mobile communications links (including those using the six channels in the 900 MHz band), RAC is responsible for authorizing requests by individual railway companies for new stations or for modification of existing stations that operate on those six channels. The six channels pairs are the same ones that are assigned for ATCS use in the United States pursuant to a geographic-area license (similar

---

<sup>2</sup> The six frequency pairs are 896.8875/935.8875 MHz, 896.9375/935.9375 MHz, 896.9875/935.9875 MHz, 897.8875/9375 MHz, 897.9375/936.9375 MHz, and 897.9875/936.9875 MHz. They are the same six pairs identified in Section 90.613 of the FCC’s rules as channels 71, 75, 79, 151, 155 and 159.

to RAC's "ribbon" license in Canada) issued by the FCC to the Association of American Railroads ("AAR").<sup>3</sup>

In 1990, the FCC and Industry Canada entered into an agreement concerning use of these six channels (as well as other channels in the band 896-901 and 935-940 MHz ) along the U.S.-Canada border. Section 2.1(c) of that agreement makes reference to the six ATCS frequency pairs and states that RAC and AAR shall be responsible for working out the details of use of the ATCS Channels in border areas.<sup>4</sup>

CN and CPR, in addition to using the those six channels under the RAC license for their train operations in Canada, also use the same channels under the AAR license for their train operations in the United States. In this regard, both CN and CPR have extensive rail operations in the United States (through subsidiaries or affiliates), and those activities, combined with the significant near-border and cross-border rail operations between Canada and the U.S., require that there be a compatible channel plan in both countries for ATCS and other rail-related communications.<sup>5</sup>

---

<sup>3</sup> See *In Re Use of Six Conventional 900 MHz Frequency Pairs for an Advanced Train Control System*, *Order*, 3 FCC Rcd 427 (1988), and *In Re Petition of AAR for Modification of Licenses for Use in Advanced Train Control Systems and Positive Train Control Systems*, *Order*, DA 01-359, 16 FCC Rcd 3078 (2001).

<sup>4</sup> "Arrangement Between the Department of Communications of Canada and the Federal Communications Commission of the United States of America Concerning the Use of the Bands 896 to 901 MHz and 935 to 940 MHz," September 17, 1990.

<sup>5</sup> For example, the Canadian and U.S. railroads also share common channel plans for their voice radio dispatch networks at 160-161 MHz, and for various

### **III. The ATCS Channels Must be Deleted from the Auctioned Spectrum**

The FCC has proposed in its NPRM to issue new geographic-area licensees by auctioning 20 “blocks” of channels in the 900 MHz band, including two blocks that include the six ATCS Channels (identified as the “DD” and “HH” blocks in the NPRM), and to permit the new licensees to provide Commercial Mobile Radio Service (“CMRS”), either in the form of cellular telephone service or Enhanced Specialized Mobile Radio service (“ESMR”). That proposal will have the effect of overriding and negating AAR’s geographic-area license for the six ATCS Channels in the United States, which will result in massive disruption of train movements and rail activity in the U.S., including the U.S. operations of CN and CPR.

That disruption will have a ripple effect in Canada in the many areas where there is significant near-border and cross-border rail traffic, as described above. For these reasons, the Canadian Railway Interests strongly urge the Commission to modify the channel blocks to be auctioned by removing the three ATCS frequency pairs from Block “DD” (Channel Nos. 71, 75 and 79) and the three from Block “HH” (Channel Nos. 151, 155 and 159).

### **IV. ATCS Channels Must be Protected from Adjacent-Channel Interference**

5. Even if the six ATCS Channels are deleted from the blocks of channels to be auctioned for the provision of CMRS, there will still be a problem of increased adjacent-channel interference unless the FCC takes corrective and

---

onboard communications devices such as “distributed power” radios and “end-of-train” radio links.

protective action. The problem will be identical to the one that has plagued incumbent licensees in the 800 MHz band in the U.S., arising from the interleaving of dissimilar and incompatible system architectures on adjacent channels (*i.e.*, where “high site, high power” land mobile dispatch systems operate on one channel, and “low site, low power” cellular or ESMR systems operate on the next). If the FCC allows CMRS systems to proliferate on channels immediately adjacent to the six ATCS Channels (which employ typical “high site, high power” technology), the same type of interference that has been suffered by incumbents in the 800 MHz band will be visited upon the mission-critical train control communication systems that are operated by the Canadian and U.S. railroads on the ATCS Channels. For this reason, the Canadian Railway Interests urge the FCC adopt interference safeguards in the form of stringent operational limits on CMRS providers who are licensed to use channels that are adjacent to the six ATCS frequencies.

## **V. Conclusion**

In conclusion, for the reasons set forth above, the Canadian Railway Interests urge the FCC to delete the six ATCS Channels from the spectrum blocks to be auctioned for CMRS providers, and to adopt operational limits on adjacent-channel CMRS operators that are sufficient to avoid a repetition of the

interference problems that occurred in the 800 MHz band as a result of the interleaving of incompatible system architectures on adjacent channels.

Respectfully submitted,

RAILWAY ASSOCIATION OF CANADA

99 Bank Street

Ottawa, ON K1P68 Canada

/S/ Bruce R. Burrows

Bruce R. Burrows

Acting President and Chief

Executive Officer

CANADIAN NATIONAL RAILWAY

935 de La Gauchetiere St. West

Montreal, Quebec H3B2M9 Canada

/S/ Fred Grigsby

Fred Grigsby

Senior Vice-President and Chief

Information Officer

CANADIAN PACIFIC RAILWAY

Gulf Canada Square

401 9<sup>th</sup> Avenue SW

Calgary, Alberta T2P 4Z4 Canada

/S/ Peter Arato

Peter Arato

Director, Signals and Communications

May 18, 2005